REMARKS

Claims 11 and 17-19 remain in the instant application, and claim 12 is canceled. Claim 11 was amended to overcome the Sheinman patent (799), with supporting disclosure therefor found on pages 6-7 of the specification and in Figure 4 of the instant application. Claim 11 was also amended to correct typographical errors. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

The Examiner rejected claims 11-12 under 35 U.S.C. § 102(e) as anticipated by and under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,626,799 to Sheinman. Applicants have amended claim 11 to distinguish the instant invention from the disclosure of Sheinman. In particular, claim 11 teaches a non-spinning zone that is not disclosed by Sheinman. Sheinman discloses in Fig. 1 a swirl device (**11**) at the bottom of the shell (**4**) and a swirl vane (**12**) arranged inside the lower portion of the shell (**4**). It is apparent that the non-spinning zone taught in claim 11 is not disclosed in Sheinman. The non-spinning zone of claim 11 also would not be obvious to one skilled in the art based on the disclosure of Sheinman. Thus, the teaching of claim 11 is neither anticipated by nor obvious in view of Sheinman, and this rejection should be kindly removed.

Newly inserted claim 17 depends from claim 11 and further teaches a packed non-spinning zone that is not disclosed in Sheinman.

Newly inserted claim 18 depends from claim 11 and teaches sieve holes on the cyclone floor that are not disclosed in Sheinman.

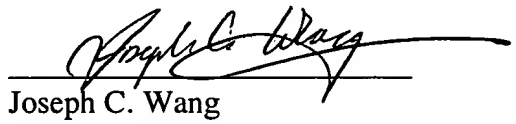
Newly added claim 19 depends from claim 11 and teaches an annular hat for collecting liquids that is not disclosed in Sheinman.

Support for claims 17-19 is found on pages 6-7 of the specification and in Figures 4 and 5 of the instant application.

The cancellation of claim 12 renders its rejection by the Examiner moot.

In view of the foregoing comments and amendments, applicants believe the case is now in condition for allowance and respectfully request the Examiner to pass the case to issue at an early date.

Respectfully submitted,



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[X] Pursuant to 37 CFR 1.34(a)

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October 24, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Claim 11 has been amended as follows:

1. (Amended Three Times) A cyclonic device suitable for use in the contacting of vapor and liquid in a distillation or fractionation process, the cyclonic device comprising:

(a) a floor;

(b) a continuous side wall having an inner surface, an outer surface, an upper end and a lower end, the lower end terminating into the floor, the upper end defining an upper cyclonic region, and the side wall defining a contacting volume above the floor and below the upper cyclonic region;

(c) at least one vapor opening in the floor for introduction of vapors into the contacting volume;

(d) at least one liquid downcomer positioned within the continuous side wall, the downcomer having:

(1) a side wall having an upper portion and a lower portion, the upper portion being located in the upper cyclonic region, and the lower portion extending to a point above the cyclone floor; and

(2) at least one downcomer port located proximate to the lower portion end of the downcomer, the port [portion] defining an opening in the downcomer for introduction of liquid above the floor into the contacting volume;

(e) a plurality of liquid outlets located on the continuous side wall; [and]

(f) at least two spin vanes located between the continuous side wall and the downcomer side wall, [substantially] the spin vanes positioned at or above [at] the mid-point of the [upper and lower end of the] continuous side wall; and

(g) a non-spinning zone located between the continuous side wall and the downcomer side wall, the non-spinning zone positioned below the midpoint of the continuous side wall and above the cyclone floor.

Claim 17-19 has been newly inserted as follows:

--17. The cyclonic device of claim 11 wherein the non-spinning zone comprises a packed non-spinning zone.--

--18. The cyclonic device of claim 11 further comprising sieve holes on the cyclone floor positioned below the non-spinning zone.--

--19. The cyclonic device of claim 11 further comprising an annular hat for collecting liquids, the hat positioned on the upper end of the continuous side wall above the upper cyclonic region.--

Claim 12 has been cancelled.